

# NORTHSTAR 1



16mm Cartridge  
Microfilm Data Terminal  
for both COM and  
conventional microfilm.

NORTHSTAR 1



IMAGE ROTATION



## OPERATING INSTRUCTIONS

1. Insert cartridge into microfilm reader.
2. Press and hold down the "LOAD" button.
3. Press and hold down the "OFF" button.
4. Press and hold down the "LOAD" button.
5. Press and hold down the "OFF" button.
6. Press and hold down the "LOAD" button.
7. Press and hold down the "OFF" button.
8. Press and hold down the "LOAD" button.
9. Press and hold down the "OFF" button.

## bright 14" by 14" screen

- Finest optics incorporate 24X lens with a 14" x 14" high-resolution, non-glare screen for easy reading and accurate interpretation.
- Permits viewing of full size printout page without special attachments.
- Special non-glare screen, designed at natural eye level, can be viewed for hours without eye fatigue.



## 360° continuous optical rotation

- Turn a dial and the image moves to any position—completely around (360°), if you desire.
- Only the prism turns, rather than the entire turret mechanism as it does in even more costly readers.
- Rotation capability is compatible with all 16mm film.
  - Rotation does not interfere with view of index media or access to controls.
  - Allows for present and future document positioning, eliminates obsolescence factor.



## changeable film platen

- Permits use of all 16mm microfilm from 2 mil to 7 mil thickness, assures positive focus.
- Easy access door makes platen change simple for any operator.



## quartz halogen lamp

- Creates an unusually bright image for fast and accurate interpretation of data.
  - Does not lose its brilliance with age.
  - Provides cost-reducing long life.



## uses 3M-type cartridge

- Indexing on cartridge assures file integrity.
  - Cartridges are conveniently sized to save file space, require only 2% as much room as paper records.
- One 100 ft. cartridge contains the images of 3,000 pages (equivalent to a stack of paper printout 2 feet high!)







NORTHSTAR 1

IMAGE POSITION

FOCUS

LOAD

HEAD

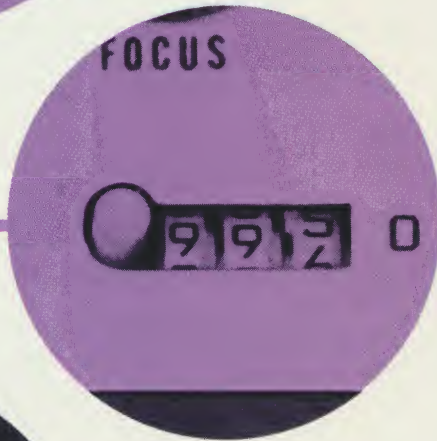
# OPERATING INSTRUCTIONS

1. Turn the power switch on.
2. Wait for the system to initialize.
3. Press the function key to start the program.
4. Use the function keys to control the program.
5. Press the function key to stop the program.
6. Press the function key to restart the program.
7. Press the function key to exit the program.
8. Press the function key to return to the main menu.



## machined castings

- *NORTHSTAR 1*'s rugged construction contains the following fine-tolerance machined castings: mirror brackets, condenser assembly, film gate, machine supports and base, lens and prism supports.
- With focus built-in at the factory, no field adjustments are required.
- Service calls are minimal.



## odometer index capability

- Provides greatest flexibility, allows you to index as you film, as film is edited or inspected, by computer programming, even after film is in the cartridge.
- Indexing assures fast, accurate data retrieval, cuts visual scanning to a minimum.
- Bar code indexing also available.



## convenient control panel

- All controls are up front, clustered at hand level.
- Ease of use adds greatly to operator comfort and reduction of fatigue.



## simplest loading in the industry

A single control dial does it all:

- Place cartridge in position, turn dial toward "advance," and the reader automatically loads itself.
- With the dial turned clockwise, the reader will advance 100 ft. of film in seconds for quick lookups of indexed data.
- With dial in slow scan position you can sit back and let *NORTHSTAR 1* turn the pages for you until you see the desired information.
- Turned counterclockwise, the dial also rewinds the film, and automatically ejects the cartridge when you are through.

## plus these great new features

- Motor tachometer, to move film smoothly.
- Electric clutches, to eliminate film and cartridge jamming.
- Constant drive mechanism, to hold constant focus.



## **NORTHSTAR** ★ 1

**... the bright new reader that shows the way with its stellar performance.**

*NORTHSTAR 1*... the ideal 16mm cartridge reader for industrial, commercial or institutional users. It combines ease of operation, maintenance-free dependability and economy with unusually wide capability.



*NORTHSTAR 1* is especially designed for computer-generated microfilm, completing the COM sequence from magnetic tape to microfilm to reader, bypassing the costly paper printout stage.

*NORTHSTAR 1* will materially aid the success of your COM program because, in addition to performing superbly, it is easy and pleasant to use. Microfilm systems stand or fall on the attitude of the end user. If the people retrieving data dislike using a reader because it is complicated and fatiguing, their resistance alone can doom the entire system to failure. Lookup people like *NORTHSTAR 1* because it is designed especially for them.



## specifications



**Film and Format:** Film thickness from .0508mm (2 mil or .002") to .1778mm (7 mil or .007")  
16mm microfilm in 3M cartridge.

**Resolution:** Minimum 4 lines/mm.

**Film Loading:** Self-threading from cartridge. High speed film advance — 100 ft. in 15 seconds.  
Film plane temperature does not exceed 110°.

**Controls:** Focus, advance, illumination, image rotation.

**Film Advance:** One dial controls forward and reverse plus all speeds from fast wind to very slow scan. The same dial also controls automatic self-threading and cartridge ejection.

**Viewing Screen:** Green 355.6mm x 355.6mm (14" x 14").

**Illumination:** Quartz Halogen 24 volt-150 watt lamp.  
Min. 35 foot lamberts.

**Color:** Two-tone olive green (light top; dark base).

**Power requirements:** 115 V, 50-60 Hz, Single Phase, 400 W

**Dimensions:** Depth: 644.5mm (25 3/8").  
Width: 419.1mm (16 1/2").  
Height: 558.8mm (22").

**Weight:** Net: 24.04 kg (53 lbs).  
Shipping: 32.20 kg (71 lbs).

**Optional Extras:** 110/220V power conversion;  
line finder;  
2.5 mil platen (5 mil standard on machine).

## Reproduction Systems

One California Street  
San Francisco, California 94111



A Microfilm Service of  
Transamerica Corporation

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